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June 27, 2018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
70111150000234378759

Illinois Environmental Protection Agency
Water Pollution Control
Compliance Assurance Section #19
Annual Inspection Report
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Re: 2018 Annual Storm Water Inspection Report
Flint Hills Resources Peru, LLC
NPDES Permit ILR000057

Dear Madam or Sir:

Enclosed is the 2018 Annual Storm Water Inspection Report for the Flint Hills Resources Peru, LLC ("FHRP") facility located in Peru, IL (the "Facility"). This report is being submitted pursuant to Condition 1 of Section K, of the Facility's General NPDES Permit ("Permit").

Pursuant to Condition 2 of Section J, initial benchmark monitoring for total zinc based on the Facility's SIC Code 2821 results were below the corrective action limits based on hardness values of the receiving waters. The average of the quarterly samples collected from discharge point A and discharge point B were 0.22 mg/L and 0.15 mg/L respectively. Receiving water hardness is estimated at 278.47 mg/L based on the average of 66 samples collected from April 2007 through April 2017 by the Illinois Environmental Protection Agency at Station D-23 from the Illinois River.

3rd and 4th Quarter 2017 Storm Water Samples

Condition 2(d) of Section J requires storm water samples to be analyzed in accordance with 40 CFR Part 136 analytical methods. Method 200.7 in 40 CFR Part 136 Appendix C states that samples can be held up to 6 months before analysis. FHR's storm water samples collected in 3rd Quarter 2017 were not analyzed within the 6-month timeframe. FHR has updated its Quarterly Storm Water Sampling Procedure to require storm water samples be sent to a third-party laboratory for analysis within one week of collection. FHR will collect an additional benchmark sample in 3rd Quarter 2018 and will report the results in FHR's 2019 Annual Storm Water Inspection Report. Condition 1(b) of Section J states visual observations must be made on samples from a storm event equal to or greater than .25 inches in 24 hours. The storm water samples collected in 4th Quarter 2017 were from a rain event that totaled .20 inches in 24 hours. FHR has updated the facility's SWPPP, Quarterly Storm Water Sampling Procedure, and Quarterly Storm Water Sample Collection Form to specify that rain events must be equal to or greater than .25 inches in 24 hours to qualify as a storm event.

As required by the Permit, a copy of the Facility's updated Storm Water Pollution Prevention Plan (SWPPP) will be electronically submitted to epa.indilr00swppp@illinois.gov on June 27, 2018.

– 501 Brunner Street – Peru, Illinois 61354 – 815-224-1525 – Fax 815-224-5278 –

Additionally, as required by the Permit, the 2018 Annual Inspection Report will be electronically submitted to epa.indannualinsp@illinois.gov on June 27, 2018.

Should you have any questions or need additional information regarding this submittal, please contact Chris Backos at (815) 224-5250.

Sincerely,

John Gratz
Acting Plant Manager

Enclosures:
- Attachment 1 – IEPA Annual Facility Inspection Report
- Attachment 2 – Quarterly Storm Water Inspection Checklist
- Attachment 3 – Quarterly Storm Water Inspection Reports and Sampling Results (3rd & 4th Qtr 2017 – 1st & 2nd Qtr 2018)
- Attachment 4 – Summary of Storm Water Related Spill Events during the Reporting Period

ATTACHMENT 1

Flint Hills Resources Peru, LLC
501 Brunner Street
Peru, Illinois
Facility NPDES Permit ID: ILR000057

Illinois EPA Annual Facility Inspection Report

Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control
ANNUAL FACILITY INSPECTION REPORT
for General Storm Water Discharges Associated with Industrial Site Activities

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. Complete each section of this report. Place a NA in sections that do not apply to your operation.

Permit No. ILR00 0057

Report Period: From: May 1, 2017 To: April 30, 2018

OWNER/OPERATOR INFORMATION: (As it appears on the current permit)

Name: Flint Hills Resources Peru, LLC

Mailing Address: 501 Brunner Street

City: Peru State: IL Zip: 61354 Telephone: 815-224-5250

Contact Person: Chris Backos (Person responsible for Annual Report)

FACILITY/SITE INFORMATION: (As it appears on the current permit)

Facility Name: Flint Hills Resources Peru, LLC Primary SIC Code: 2821

Facility Location: 501 Brunner Street

City: Peru IL Zip: 61354 County: LaSalle

RECEIVING WATER INFORMATION:

☐ Storm Sewer Owner of Storm Sewer Systems:

☒ Waters of the State Closest Receiving Waters: Illinois River

ADDITIONAL INFORMATION:

Has this facility received an NPDES Permit under a different owner/operator name in the past? If so, list last name permit was issued to: Huntsman Expandable Polymers

Attach information on any activity that has occurred at this facility during the report period that may have resulted in pollutants discharged to storm water runoff (e.g. Spills).

Attach information on any changes to the facility or the activity occurring at the facility that resulted in significant changes to the SWPPP.

Attach information concerning quarterly visual observations of discharges as found in Section E, Item 8 of the Permit.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

John H Gratz — Owner Signature:

6-26-18 — Date:

John Gratz — Printed Name:

Acting Plant Manager — Title:

EMAIL COMPLETED FORM TO: epa.indannualinsp@illinois.gov

or Mail to: ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL
COMPLIANCE ASSURANCE SECTION #19
1021 NORTH GRAND AVENUE EAST
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

IL 532 2585
WPC 691 Rev 2/2013

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

ATTACHMENT 2

Flint Hills Resources Peru, LLC
501 Brunner Street
Peru, Illinois
Facility NPDES Permit ID: ILR000057

Quarterly Storm Water Inspection Checklist

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ENVIRONMENTAL DEPARTMENT

QUARTERLY STORM WATER MANAGEMENT INSPECTION CHECKLIST

Date 8/10/17 Weather Conditions Cloudy / Rain

Inspector Name/Title: Adam Chapman - Environmental Engineer

Y/N	DESCRIPTION: COMMENTS REQUIRED IF ANSWERED YES
N	Trash, litter, debris in the vicinity of stormwater collection system components
Y	Significant outdoor accumulations of beads on site – N. Pedd - Spoke w/Dean B on vacuuming beads
N	Spillage at compactors
N	Improper outdoor storage of materials, equipment, and chemicals
N	Storage boxes and bags -- torn, damaged, exposed to run-off, spillage
N	Tanks -- corrosion, damage, inadequate support, containment issues, leakage, etc.
N	Drums -- corrosion, damage, uncovered, containment issues, spillage, etc. – Some surface rust on Non-Haz Drums in Haz-Pad.
N	Secondary containment structures -- structural integrity, presence of oil or residue filled with water, valves open?
N	Piping and valves -- corrosion, leakage, supports, etc.
ND	Sheen on skimming pond? Over/under weir performing incorrectly? Stop gate (Outfall #2) valve non-operational?
ND	Sheen on Manhole-050 water? Over/under weir performing incorrectly? Stop gate (Outfall #1) valve non-operational?

QUARTERLY STORM WATER MANAGEMENT INSPECTION CHECKLIST

N Pumps and hose connections ~~not~~ structurally sound? Leakage?

N Sludge accumulations near wastewater plant

N Oil staining on ground (outdoors)

N Other residue, discolored surfaces (outdoors)

N Erosion problems

Y Accumulations of debris/sediment at catch basins/inlets, stop gates, skimmer pond
- No. of empty drum pad @ catch basin. Spoke w/ Dan Buck to remove @ gravel/CALC

N Any non-stormwater discharge to Illinois River

Y Spill response equipment and supplies at appropriate locations

N Any other issues of non-compliance observed during this inspection

Signature Adam Clay

Inspector's Supplemental Comments:

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ENVIRONMENTAL DEPARTMENT

QUARTERLY STORM WATER MANAGEMENT INSPECTION CHECKLIST

Date 12/18/17 Weather Conditions Partly Cloudy w/ Light Rain

Inspector Name/Title: Mike Wallman - Env Engineer

Y/N	DESCRIPTION: COMMENTS REQUIRED IF ANSWERED YES
N	Trash, litter, debris in the vicinity of stormwater collection system components
N	Significant outdoor accumulations of beads on site
Yes	Spillage at compactors
N	Improper outdoor storage of materials, equipment, and chemicals
N	Storage boxes and bags -- torn, damaged, exposed to run-off, spillage
N	Tanks -- corrosion, damage, inadequate support, containment issues, leakage, etc.
N	Drums -- corrosion, damage, uncovered, containment issues, spillage, etc.
N	Secondary containment structures -- structural integrity, presence of oil or residue filled with water, valves open?
N	Piping and valves -- corrosion, leakage, supports, etc.
N	Sheen on skimming pond? Over/under weir performing incorrectly? Stop gate (Outfall #2) valve non-operational?
N	Sheen on Manhole-050 water? Over/under weir performing incorrectly? Stop gate (Outfall #1) valve non-operational?

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ENVIRONMENTAL DEPARTMENT

QUARTERLY STORM WATER MANAGEMENT INSPECTION CHECKLIST

N Pumps and hose connections Not structurally sound? Leakage?

N Sludge accumulations near wastewater plant

N Oil staining on ground (outdoors)

N Other residue, discolored surfaces (outdoors)

N Erosion problems

N Accumulations of debris/sediment at catch basins/inlets, stop gates, skimmer pond

N Any non-stormwater discharge to Illinois River

Yes Spill response equipment and supplies at appropriate locations

N Any other issues of non-compliance observed during this inspection

Signature Mike Walker - Env Engineer

Inspector's Supplemental Comments:

The bottom of the compactor outside Shipping is cracking at the bottom and material is starting to fall on ground. Material is general trash & beads and is concentrated to one area. No impact to storm sewers. RVC notified & contractor will vac truck the material up & compactor will be fixed/repaired.

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ENVIRONMENTAL DEPARTMENT

QUARTERLY STORM WATER MANAGEMENT INSPECTION CHECKLIST

Date 3-1-2018 Weather Conditions Rain (Light)

Inspector Name/Title: Mike Wallman - Env Engineer

Y/N	DESCRIPTION: COMMENTS REQUIRED IF ANSWERED YES
N	Trash, litter, debris in the vicinity of stormwater collection system components
N	Significant outdoor accumulations of beads on site
N	Spillage at compactors
N	Improper outdoor storage of materials, equipment, and chemicals
N	Storage boxes and bags -- torn, damaged, exposed to run-off, spillage
N	Tanks -- corrosion, damage, inadequate support, containment issues, leakage, etc.
N	Drums -- corrosion, damage, uncovered, containment issues, spillage, etc.
N	Secondary containment structures -- structural integrity, presence of oil or residue filled with water, valves open?
N	Piping and valves -- corrosion, leakage, supports, etc.
N	Sheen on skimming pond? Over/under weir performing incorrectly? Stop gate (Outfall #2) valve non-operational?
N	Sheen on Manhole-050 water? Over/under weir performing incorrectly? Stop gate (Outfall #1) valve non-operational?

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QUARTERLY STORM WATER MANAGEMENT INSPECTION CHECKLIST

N — Pumps and hose connections (No) structurally sound? Leakage?

N — Sludge accumulations near wastewater plant

N — Oil staining on ground (outdoors)

N — Other residue, discolored surfaces (outdoors)

N — Erosion problems

N — Accumulations of debris/sediment at catch basins/inlets, stop gates, skimmer pond

N — Any non-stormwater discharge to Illinois River

Y — Spill response equipment and supplies at appropriate locations

N — Any other issues of non-compliance observed during this inspection

Signature Mike Walden

Inspector's Supplemental Comments:

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ENVIRONMENTAL DEPARTMENT

QUARTERLY STORM WATER MANAGEMENT INSPECTION CHECKLIST

Date 5-21-18 Weather Conditions Rain

Inspector Name/Title: Mike Wallman - Environmental Engineer

Y/N	DESCRIPTION: COMMENTS REQUIRED IF ANSWERED YES
No	Trash, litter, debris in the vicinity of stormwater collection system components
No	Significant outdoor accumulations of beads on site
No	Spillage at compactors
No	Improper outdoor storage of materials, equipment, and chemicals
No	Storage boxes and bags -- torn, damaged, exposed to run-off, spillage
No	Tanks -- corrosion, damage, inadequate support, containment issues, leakage, etc.
No	Drums -- corrosion, damage, uncovered, containment issues, spillage, etc.
No	Secondary containment structures -- structural integrity, presence of oil or residue filled with water, valves open?
No	Piping and valves -- corrosion, leakage, supports, etc.
No	Sheen on skimming pond? Over/under weir performing incorrectly? Stop gate (Outfall #2) valve non-operational?
No	Sheen on Manhole-050 water? Over/under weir performing incorrectly? Stop gate (Outfall #1) valve non-operational?

QUARTERLY STORM WATER MANAGEMENT INSPECTION CHECKLIST

No Pumps and hose connections not structurally sound? Leakage?

No Sludge accumulations near wastewater plant

No Oil staining on ground (outdoors)

No Other residue, discolored surfaces (outdoors)

No Erosion problems

No Accumulations of debris/sediment at catch basins/inlets, stop gates, skimmer pond
→ Small accumulation of beads in duck pond in Northwest corner. Talked with Shift Supervisor to have them skimmed out of pond.

No Any non-stormwater discharge to Illinois River

Yes Spill response equipment and supplies at appropriate locations

No Any other issues of non-compliance observed during this inspection

Signature Mike Wall

Inspector's Supplemental Comments:

There are 10 rolloffs and 2 frac tanks filled with waste on site. All the containers are in 10' x 50' poly secondary containments and are not leaking. The secondary containments are in good shape.

ATTACHMENT 3

Flint Hills Resources Peru, LLC
501 Brunner Street
Peru, Illinois
Facility NPDES Permit ID: ILR000057

Quarterly Storm Water Inspection Reports and Sampling Results
(2nd & 3rd Qtr 2017 – 1st & 2nd Qtr 2018)

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501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	8/10/17 – 9:00
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	0.700 inches
Date and Time of Sampling	8/10/17 – 10:00 Am
Sample Location	MA-50
Sample Collector's Name and Title	Dan Burke – Shift Supervisor

Sample Observer's Name and Title *(must be different from sample collector)*	Adam Chapman Environmental Engineer
Time of Sample Observation	8/10/17 – 13:15
Color	Most Clear/Yellow Tint
Odor	None
pH	8.3
Clarity	Mostly Clear/Slight Yellow Haze
Floating Solids	None
Settled Solids	Bottom Mostly Covered
Suspended Solids	Very Small Particles
Foam	None
Oil Sheen	None
Other Obvious Indicators of Pollution	None

X Dan Burke
Signature/Title of Sample Collector

X 8-10-17
Date

Adam Chapman
Signature/Title of Sample Observer

8/10/17
Date:

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501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	8/10/17 - 9:00
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	0.06 inches
Date and Time of Sampling	8/10/17 - 9:40
Sample Location	Duck Pond
Sample Collector's Name and Title	Dan Buck - shift supervisor

Sample Observer's Name and Title *(must be different from sample collector)*	Adam Chapman - Environmental Engineer
Time of Sample Observation	8/10/17 - 13:00
Color	Clear / None
Odor	None
pH	7.9
Clarity	Mostly Clear
Floating Solids	None
Settled Solids	Bottom Loosely Covered
Suspended Solids	Small Amount
Foam	None
Oil Sheen	None
Other Obvious Indicators of Pollution	None

X D. Buck
Signature/Title of Sample Collector

X 8-10-17
Date

A. Chapman
Signature/Title of Sample Observer

8/10/17
Date:

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501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	11/15/2017 09:05
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	.20 in.
Date and Time of Sampling	11/15/2017 09:05
Sample Location	Duck Pond
Sample Collector's Name and Title	Mike Wallman - Env Engineer

Sample Observer's Name and Title *(must be different from sample collector)*	Adam Chapman - Env Engineer
Time of Sample Observation	11/15/2017 09:05
Color	Clear
Odor	None
pH	8.44
Clarity	Slightly Hazy
Floating Solids	None
Settled Solids	1/32"
Suspended Solids	None
Foam	None
Oil Sheen	None
Other Obvious Indicators of Pollution	None

Mike Wallman - Environmental Engineer
Signature/Title of Sample Collector

11/15/2017
Date

Adam Chapman - Env. Engineer
Signature/Title of Sample Observer

11/15/2017
Date:

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501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	11/15/17 09:27
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	.20 in.
Date and Time of Sampling	11/15/17 09:27
Sample Location	MH #50
Sample Collector's Name and Title	Mike Wallman - Env Engineer

Sample Observer's Name and Title *(must be different from sample collector)*	Adam Chapman - Env Engineer
Time of Sample Observation	11/15/2017 09:27
Color	Clear
Odor	None
pH	8.46
Clarity	Slightly Hazy
Floating Solids	None
Settled Solids	1/32"
Suspended Solids	Few Small Particles
Foam	None
Oil Sheen	None
Other Obvious Indicators of Pollution	None

Mike Wallman
Signature/Title of Sample Collector

11/15/2017
Date

Adam Chapman - Env. Engineer
Signature/Title of Sample Observer

11/15/2017
Date:

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501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	1-22-18 14:00
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	.79 in
Date and Time of Sampling	1-22-18 14:00
Sample Location	MH#50
Sample Collector's Name and Title	Mike Wallman - Env Engineer

Sample Observer's Name and Title *(must be different from sample collector)*	Blake Jacobs - HES Coordinator
Time of Sample Observation	14:00
Color	Clear
Odor	None
pH	8.37
Clarity	Slightly Hazy
Floating Solids	None
Settled Solids	None
Suspended Solids	None
Foam	None
Oil Sheen	None
Other Obvious Indicators of Pollution	None

Mike Wallman - Env Engineer
Signature/Title of Sample Collector

1-22-18
Date

HES Coordinator
Signature/Title of Sample Observer

1-22-18
Date:

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501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	1-22-18 14:00
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	.79 in
Date and Time of Sampling	1-22-18 14:00
Sample Location	Duck Pond
Sample Collector's Name and Title	Mike Wallman - Env Engineer

Sample Observer's Name and Title *(must be different from sample collector)*	Blake Jacobs - HES Coordinator
Time of Sample Observation	14:00
Color	Slightly Murky
Odor	None
pH	8.49
Clarity	Slightly Hazy
Floating Solids	None
Settled Solids	None
Suspended Solids	None
Foam	None
Oil Sheen	None
Other Obvious Indicators of Pollution	None

Mike Wallman - Env Engineer
Signature/Title of Sample Collector

1-22-18
Date

HES Coordinator
Signature/Title of Sample Observer

1-22-18
Date:

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501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	5-21-18 11:25 AM
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (must be .25 inches to be qualifying rain event)	.92 in.
Date and Time of Sampling	5-21-18 11:25 AM
Sample Location	Duck Pond
Sample Collector's Name and Title	Mike Wallman - Environmental Engineer

Sample Observer's Name and Title *(must be different from sample collector)*	Dustin Carlson - Shift Sup.
Time of Sample Observation	11:25 AM
Color	Slightly Murky
Odor	None
pH	8.50
Clarity	Clear
Floating Solids	None
Settled Solids	Very thin layer on bottom
Suspended Solids	None
Foam	None
Oil Sheen	None
Other Obvious Indicators of Pollution	None

Mike Wallman Environmental Engineer
Signature/Title of Sample Collector

5-21-18
Date

Shift Sup.
Signature/Title of Sample Observer

5/21/18
Date:

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501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	5-21-18 11:20 AM
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (must be .25 inches to be qualifying rain event)	.92 in.
Date and Time of Sampling	5-21-18 11:20 AM
Sample Location	MH-50
Sample Collector's Name and Title	Mike Wollman - Environmental Engineer

Sample Observer's Name and Title *(must be different from sample collector)*	Dustin Carlson - Shift Sup.
Time of Sample Observation	11:20 AM
Color	Clear
Odor	None
pH	8.52
Clarity	Clear
Floating Solids	None
Settled Solids	few particles on bottom
Suspended Solids	None
Foam	None
Oil Sheen	None
Other Obvious Indicators of Pollution	None

Mike Wollman Environmental Engineer
Signature/Title of Sample Collector

5-21-18
Date

[signature] Shift Sup.
Signature/Title of Sample Observer

5/21/18
Date:

FHR-Peru Quarterly Storm Water Benchmark Sampling Results: 3rd & 4th Quarter 2017 and 1st & 2nd Quarter 2018.					
Sample Quarter	**Collection Date**	**Sampling Location**	**Result**	**Unit**	**Analyte**
3rd 2017	8/10/2017	Discharge Point B	0.44	mg/L	Zinc
3rd 2017	8/10/2017	Discharge Point A	0.48	mg/L	Zinc
4th 2017	11/15/2017	Discharge Point B	0.077	mg/L	Zinc
4th 2017	11/15/2017	Discharge Point A	0.12	mg/L	Zinc
1st 2018	1/22/2018	Discharge Point B	0.055	mg/L	Zinc
1st 2018	1/22/2018	Discharge Point A	0.24	mg/L	Zinc
2nd 2018	5/21/2018	Discharge Point B	0.035	mg/L	Zinc
2nd 2018	5/21/2018	Discharge Point A	0.034	mg/L	Zinc
		Average Discharge Point B	0.15	mg/L	
		Average Discharge Point A	0.22	mg/L	

ATTACHMENT 4

Flint Hills Resources Peru, LLC
501 Brunner Street
Peru, Illinois
Facility NPDES Permit ID: ILR000057

Summary of Spill Events During the Reporting Period

May 1, 2017 through April 30, 2018

(List of Spills Potentially Impacting Stormwater Runoff)

Flint Hills Resources Peru, LLC
Facility NPDES Permit ID ILR000057
Attachment 4: Summary of Spill Events During the Reporting Period (May 1, 2017 through April 30, 2018)

Incident Date	Time of Spill (24-Hr Format)	Duration of Spill (minutes)	Estimated Release Quantity	Material(s) Involved	Location of Spill	Description of Spill	Cause of Spill	Spilled Surface	Mitigation and Prevention
June 3, 2017	20:30	Unknown	< 1 quart	Waste lab solvent mixture (Toluene, Tetrahydrofuran, and Methylene Chloride)	Hazardous waste storage area secondary containment	A security guard conducting nightly rounds discovered a small pinhole leak on a 30-gallon drum of waste lab solvent.	Small pinhole leak on waste drum	Concrete secondary containment	Absorbent pads were immediately placed on the liquid. The concrete secondary containment was cleaned, and the 30-gallon waste drum was placed into a 55-gallon overpack container. The secondary containment contained all liquid and there was no discharge to the facility's storm water sewer system. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
June 13, 2017	08:30	.5 minutes	Approximated at 2 gallons	Hydraulic oil	North of extrusion/south of the PEP filter house	A contractor driving a skid-steer developed a hydraulic hose leak while operating a street sweeper attachment.	Loose hydraulic oil hose	Asphalt	Contractor immediately turned the equipment off and granular oil absorbent was placed on the affected asphalt surface. No hydraulic oil was discharged to the facility's storm water sewer system. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
July 10, 2017	09:30	.25 minutes	Approximated at 1 gallon	Gasoline	Southeast corner of maintenance shop	A contractor overfilled a portable gas tank and gas spilled to asphalt.	Portable gas tank overfill	Asphalt	Contractor immediately stopped filling the tank and absorbent pads were used to absorb the gas. No gas was discharged to the facility's storm water sewer system. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
July 12, 2017	06:57	5 minutes	Approximated at 1,000 gallons	Cooling tower water	Cooling tower basin	The cooling tower water basin was overfilled due to a water control valve mechanical failure. The water overflowed to asphalt and migrated to the storm water retention pond.	Mechanical failure—Faulty water control valve	Asphalt	The storm water retention pond discharge valve was in the closed position and no water was discharged to the river. Maintenance replaced the cooling tower water control valve. The storm water retention pond water was pumped to the facility's wastewater treatment plant and an industrial cleaning contractor was used to clean the retention pond.
September 12, 2017	09:00	24 hours	Approximated at 10 gallons	Steam condensate	Piperack outside boiler house	A steam condensate line in the pipe rack leading from the boiler house to the warehouse leaked condensate to asphalt.	Small pinhole leak on condensate line	Asphalt	The condensate line was isolated to stop the discharge and was repaired by maintenance. All steam condensate on the asphalt was contained, and no condensate entered the facility's storm water sewer system.

Flint Hills Resources Peru, LLC
Facility NPDES Permit ID ILR000057
Attachment 4: Summary of Spill Events During the Reporting Period (May 1, 2017 through April 30, 2018)

Incident Date	Time of Spill (24-Hr Format)	Duration of Spill (minutes)	Estimated Release Quantity	Material(s) Involved	Location of Spill	Description of Spill	Cause of Spill	Spilled Surface	Mitigation and Prevention
September 21, 2017	16:40	30 minutes	Approximated at 1,000 gallons	Wastewater sludge	Waste treatment plant	A utility operator noticed the waste treatment plant sludge pit overfilled, loss primary containment, and was flowing to the concrete floor drains of the clarifiers. The floor drains discharge to the facility's west storm sewer stop gate. The storm sewer gate valve was in the closed position.	Mechanical failure—Filter press isolation valve for sludge bypass failed due to corrosive sludge	Concrete	The utility operator immediately verified the facility's west storm sewer gate valve was in the closed position and then stopped flow from the sludge pit. It was verified no sludge was discharged to the river. The storm sewer vault and impacted drains and surfaces were flushed for 4 hours. All flush waters were pumped to the waste treatment plant surge tank. Maintenance replaced the filter press isolation valve and associated piping with equipment that is compatible with the waste treatment corrosive sludge.
October 11, 2017	08:30	30 minutes	Approximated at .5 gallons	Oil sheen	West of building 4	After generators were unloaded from a contractor's flatbed truck, an oil sheen was observed on the asphalt underneath the truck.	Contractor truck oil leak	Asphalt	Absorbent pads and oil absorbent were used to absorb the sheen. The oil sheen was not discharged to the facility's storm water sewer system. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
October 21, 2017	07:15	1 hour	Approximated at 75 gallons	Styrene	Flare building and storm water retention pond	A building 4 process upset caused styrene to enter the facility's flare building seal pots and pump system. The flare building is located adjacent to the storm water retention pond. When maintenance work was being performed to clean the flare building, styrene spilled onto the asphalt between the building and storm water retention pond. Absorbent pigs and pads were placed around the storm water retention pond to prevent styrene from entering, however, it is estimated approximately 25 gallons entered the pond and 50 gallons was absorbed by the absorbent materials and asphalt.	Flare building seal pots and pumps	Asphalt	The storm water retention pond discharge valve was in the closed position and no styrene was discharged to the river. Absorbent pads, pigs, and granular absorbent materials were placed inside and outside the flare building to absorb the styrene. An oil absorbing boom spanning the width of the storm water retention pond was placed in the pond to absorb styrene on the surface. A vacuum truck was used to remove the styrene sheen on the surface of the storm water retention pond and the remainder of the pond's water was pumped to the facility's wastewater treatment plant. An industrial cleaning contractor was used to clean the retention pond. The styrene contaminated asphalt outside the flare building was dug up and removed on November 7 and 8, 2017 and fresh concrete was poured on November 9, 2017. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.

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October 23, 2017	02:00	.5 minutes	Approximated at 30 gallons	Fire foam	West of building 4	The drain on the Building 4 foam system was opened to ensure there was no stored pressure, and a water and foam concentrate mixture spilled to asphalt.	Building 4 foam system drain	Asphalt	The Building 4 foam system drain was closed, and absorbent pads and granular absorbent material were used to absorb the water foam mixture. No water foam mixture entered the facility's storm water sewer system, and all absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
October 23, 2017	11:00	.5 minutes	< 1 cup	Oil sheen	Main guard office	An employee noticed an oil sheen on the asphalt underneath the facility's main gate entrance. The sheen was traced to a contractor truck that had left the facility.	Contractor truck oil leak	Asphalt	Absorbent pads and granular oil absorbent material were used to absorb the sheen. The oil sheen was not discharged to the facility's storm water sewer system. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
October 24, 2017	15:00	Unknown	< .5 cup	Oil sheen	Trash compactor on southeast side of building 3	After a rain event, an employee noticed a small oil sheen in a water puddle directly below a trash compactor. A thin layer of oily residue had formed below the trash compactor's hydraulic oil hose and was washed away during the rain.	Trash compactor hydraulic oil hose	Asphalt	Absorbent pads and pillows were used to absorb the sheen and the trash compactor's hydraulic oil hose was inspected for leaks. The oily residue that had built up on the surface below the hydraulic oil hose was removed and all absorbent materials were properly disposed of in accordance with the facility's waste management procedure. The oil sheen was not discharged to the facility's storm water sewer system.
October 25, 2017	13:30	Unknown	< 1 quart	Styrene sheen	Storm water retention pond	Employee noticed sheen on the storm water retention pond. A rain event from the day before caused the residual styrene on the asphalt from the October 21st, 2017 incident to enter the storm water retention pond.	Asphalt outside the flare building	Asphalt	The storm water retention pond discharge valve was in the closed position and no sheen was discharged to the river. An oil absorbing boom spanning the width of the retention pond was installed. A vacuum truck was used to remove the sheen on the surface of the pond. New absorbent pigs and pads were placed around the side of the storm water retention pond parallel to the flare building. The styrene contaminated asphalt outside the flare building was dug up and removed on November 7 and 8, 2017 and fresh concrete was poured on November 9, 2017. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.

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October 27, 2017	10:00	Unknown	< 1 cup	Styrene sheen	Storm water retention pond	Employee noticed sheen on the storm water retention pond.	Asphalt outside the flare building	Asphalt	The storm water retention pond discharge valve was in the closed position and no sheen was discharged to the river. An oil absorbing boom spanning the width of the retention pond was already installed. A vacuum truck was used to remove the sheen on the surface of the pond. New absorbent pigs and pads were placed around the side of the storm water retention pond parallel to the flare building. The styrene contaminated asphalt outside the flare building was dug up and removed on November 7 and 8, 2017 and fresh concrete was poured on November 9, 2017. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
October 27, 2017	10:15	Unknown	Approximated at .5 gallons	Water with styrene sheen	East of shipping/receiving	During a waste roll-off inspection, an employee observed three roll-offs that were dripping at the back-door seam. Small tears in the secondary containments allowed the leaking liquid to form a small puddle outside the containments. The roll-offs contained corn cob absorbent, polystyrene, water, and styrene.	Leaking roll-off container and tear in secondary containment	Gravel	Absorbent pads were used to absorb the liquid that had leaked out of the secondary containments. A contractor with a vacuum truck removed the liquid in the containments and removed the gravel that had come in contact with the liquid. The roll-offs were removed from the torn secondary containments and placed into new containments. Drip pans were placed into the new secondary containments along the roll-off door seams. New roll-offs were brought to the facility and the waste was transferred from the leaking roll-offs. No water or styrene sheen entered the facility's storm water sewer system. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
November 2, 2017	09:45	Unknown	< 1 cup	Styrene sheen	Storm water retention pond	Employee noticed sheen on the storm water retention pond. A rain event from the day before caused the residual styrene on the asphalt from the October 21st, 2017 incident to enter the storm water retention pond.	Asphalt outside the flare building	Asphalt	The storm water retention pond discharge valve was in the closed position and no sheen was discharged to the river. An oil absorbing boom spanning the width of the retention pond was already installed. A vacuum truck was used to remove the sheen on the surface of the pond. New absorbent pigs and pads were placed around the side of the storm water retention pond parallel to the flare building. The styrene contaminated asphalt

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									outside the flare building was dug up and removed on November 7 and 8, 2017 and fresh concrete was poured on November 9, 2017. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
November 2, 2017	10:00	Unknown	< 2 ounces	Oil sheen	Trash compactor on southeast side of building 3	After a rain event, an employee noticed a small oil sheen in a water puddle directly below a trash compactor.	Trash compactor hydraulic oil hose	Asphalt	The sheen was vacuum trucked by a contractor and maintenance tightened the hydraulic oil hose. Absorbent pads were placed underneath the compactor control box. The oil sheen was not discharged to the facility's storm water sewer system. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
February 20, 2018	16:05	1 minute	< 1 cup	Oil sheen	East main parking lot	During a rain event, an employee observed a small oil sheen exiting the facility's east main parking lot and entering a storm sewer located on Brunner Street. The oil sheen was tracked to a front-end loader that was brought onsite from a neighboring facility to assist with removing an FHR vehicle that was stuck in wet gravel. When the front-end loader entered the facility, an estimated 3 ft by 3 ft oil sheen was discovered on the asphalt outside the main security office near the east parking lot. During ensuing heavy rains, the oil sheen migrated to the public roadway north of the east parking lot and entered a City of Peru storm water sewer.	Non-FHR front-end loader	Asphalt	The FHR Environmental Department was notified of the oil sheen at 5:15 PM and immediately went to the storm water outfall discharge to inspect the location. No visible oil sheen was present on the surface water at the storm water discharge point on the Illinois River. All indications of the original sheen on the asphalt in the parking lot were washed away during heavy rains. Additional areas where the front-end loader had traveled throughout the facility were inspected for oil sheens. Additional oil sheens discovered were absorbed with absorbent pads and oil dry absorbent and were disposed of in accordance with the facility's waste management procedure. Out of abundance of caution, the National Response Center and Illinois Emergency Management Agency were notified at 6:16 PM and 6:34 PM respectively. FHR reviewed its SWPPP within 14-days of the release and installed a spill kit with oil absorbent at the facility's east parking lot main gate entrance. Additionally, oil sheen awareness documents were distributed to all employees, and plant security guards. On February 26, 2018, FHR submitted a 5-day follow-up report on the February 20,

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									2018 oil sheen discharge notification to the IEPA.
February 26, 2018	11:00	.5 minutes	Approximated at .5 gallons	Water propylene glycol mixture	East side of building 4	The east side of building 4 compactor was damaged when a contractor driving a truck backed into it. The force caused the compactor to dislodge from the asphalt and break the building 4 fire suppression line. The break in the line caused a water and propylene glycol mixture to spill to asphalt.	Break in building 4 fire suppression line	Asphalt	Absorbent pads were used to absorb the propylene glycol mixture on the asphalt. A storm sewer leading to the facility's storm water retention pond was in close proximity to the leak, and out of an abundance of caution, the total capacity of the storm water retention pond was pumped to the facility's waste treatment plant. At the time of the incident, the storm water retention pond discharge valve was in the closed position and no water was discharged to the river. FHR replaced the fire suppression system with new equipment following the incident. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.
March 4, 2018	00:30	5 minutes	Approximated at 50 gallons	Cooling tower water	West side of cooling tower	A utility operator discovered a cracked fitting on a 3/8" water line in the cooling tower control valve cabinet. Cooling tower water spilled to asphalt.	Mechanical failure— cracked fitting on 3/8" water line	Asphalt	Absorbent pigs and pads were used to absorb and stop the flow of the water. The water did not reach the facility's storm water sewer system. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure. The 3/8" cracked fitting on the water line was replaced.
March 29, 2018	10:00	5 minutes	< 2 cups	Oil sheen	Northeast building 4 concrete pad	An oil sheen developed while the concrete pad on the northeast side of Building 4 was being pressure washed. The sheen migrated to the asphalt and was diked using absorbents.	Oil residue from pumps on concrete pad	Asphalt	Absorbent pigs and pads were used to absorb the sheen, and absorbent pigs were placed around a nearby storm drain that discharges to the facility's storm water retention pond. The inside of the storm drain, and storm water retention pond were inspected, and the sheen did not enter the facility's storm water sewer system. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure.

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April 27, 2018	09:40	2 hours	Approximated at 10 gallons	Cooling tower water	West side of cooling tower	A utility operator discovered the cooling tower pressure transmitter 1/4" tubing was leaking in the cooling tower control valve cabinet. Cooling tower water spilled to asphalt.	Leaking pressure transmitter 1/4" tubing	Asphalt	Absorbent pigs and pads were used to absorb and stop the flow of the water. The water did not reach the facility's storm water sewer system. All absorbent materials were properly disposed of in accordance with the facility's waste management procedure. The cooling tower pressure transmitter 1/4" tubing was repaired.